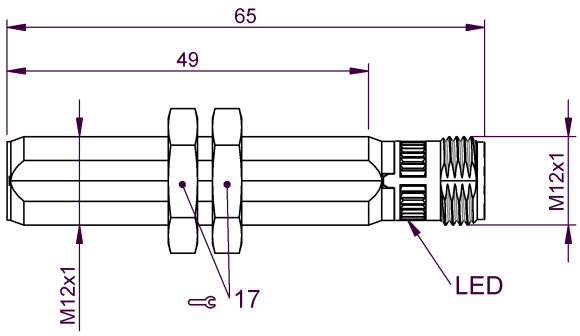
Inductive Sensors

BES M12ZI-NSC40B-S04G
Order Code: BES0659



Basic features

Application	Object detection
Approval/Conformity	CE cULus WEEE UKCA
Basic standard	IEC 60947-5-2
Principle of operation	Inductive sensor
Scope of delivery	2x nut M12x1

Display/Operation

Function indicator	yes
Power indicator	yes

Electrical connection

Connection	M12x1-Male, 3-pin, A-coded
Electrical version	3-wire
Polarity reversal protected	yes
Protection against device mix-ups	yes
Short-circuit protection	yes

Electrical data

Load capacitance max. at Ue	1 µF
Min. operating current Im	0 mA
No-load current Io max., damped	8.5 mA
No-load current Io max., undamped	5 mA
Operating voltage Ub	10...30 VDC
Output resistance Ra	open source
Rated insulation voltage Ui	75 V DC
Rated operating current Ie	100 mA
Rated operating voltage Ue DC	24 V
Rated short circuit current	100 A
Ready delay tv max.	50 ms
Ripple max. (% of Ue)	15 %
Switching frequency	350 Hz
Utilization category	DC -13
Voltage drop static max.	1.3 V

Environmental conditions

Ambient temperature	-25...70 °C
Contamination scale	3
EN 60068-2-27, Shock	Half-sinus, 30 g_n, 11 ms
EN 60068-2-6, Vibration	55 Hz, amplitude 1 mm, 3x30 min
IP rating	IP67

Functional safety

MTTF (40 °C)	1410 a

Interface

Switching output	NPN normally open (NO)

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Material

Housing material	Die-cast zinc, nickel-plated PC
Material sensing surface	PBT

Mechanical data

Dimension	Ø 12 x 65 mm
Installation	for flush mounting
Mounting length	49 mm
Size	M12x1
Tightening torque max.	6 Nm

Range/Distance

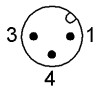
Assured operating distance Sa	3.2 mm
Hysteresis H max. (% of Sr)	15 %
Rated operating distance Sn	4 mm
Repeat accuracy max. (% of Sr)	5 %
Switching distance marking	■■
Temperature drift max. (% of Sr)	10 %
Tolerance Sr	10 %

Remarks

The sensor is functional again after the overload has been eliminated.
Find the installation instructions for inductive sensors in the download area of the sensor on the homepage.
Status LED:
Off: No supply voltage or sensor defective
Green: Sensor ready, supply voltage applied
Yellow: Target detected
Red: Error detected: short circuit
undervoltage < 5-8 VDC
overtemperature or overload
Error condition is only displayed in damped state
Effective operating distance Sr: Lower tolerance limit can be -12.5% in exceptional cases.
For more information about MTTF and B10d see MTTF / B10d Certificate

Indication of the MTTF- / B10d value does not represent a binding composition and/or life expectancy assurance; these are simply experiential values with no warranty implications. These declared values also do not extend the expiration period for defect claims or affect it in any way.

Connector Drawings



Wiring Diagrams (Schematic)

